

REMARKS

The Office Action mailed June 24, 2005, has been received and reviewed. Claims 11 through 18, 21 through 28, and 31 through 46 are currently pending in the application. Claims 11 through 18, 21 through 28, and 31 through 46 stand rejected. Applicants have amended claims 11 through 18 and 21 through 28, and respectfully request reconsideration of the application as amended herein.

35 U.S.C. § 102(e) Anticipation Rejections

Anticipation Rejection Based on U.S. Patent No. 5,656,886 to Westphal et al.

Claims 11 through 13, 15, 17, 18, 21 through 23, 25, 27, 28, 31 through 33, 35, 37 through 41, 43, 45 and 46 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Westphal et al. (U.S. Patent No. 5,656,886). Applicants respectfully traverse this rejection, as hereinafter set forth.

Westphal et al. recite a structure that “starts with a substrate 18, such as glass, with a cap layer 20, such as deposited SiO₂, with a resistive layer 22, such as amorphous, microcrystalline, or polycrystalline silicon, deposited thereon forming the resistive layer for a passive matrix field emission display device.” *See, Westphal et al.* at col. 3, lines 9-13. In particular, the resistive layer 22 “can be formed from amorphous microcrystalline, or polycrystalline silicon or any other semiconductor thin film with the desired electrical characteristics.” *Id.* at lines 54-57. “A layer of cathode material 28, such as amorphous silicon, is deposited directly on top of the protective layer 24 and contacts the resistive layer 22 through holes 26 forming conductive bases 30,” the cathode material then being etched to form emitter tips. *Id.* at lines 18-26.

The anticipation rejection proffered by the Action relies on the recited substrate as the basis for the rejection. More particularly, the Action relies on Figures 3 and 4 of Westphal et al. to anticipate Claims 11 through 13, 15, 17, 18, 21 through 23, 25, 27, 28, 31 through 33, 35, 37 through 41, 43, 45 and 46. However, Figures 3 and 4 of Westphal et al., as well as the recited substrate, fail to expressly or inherently describe each and every element of the recited claims. Since “a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference,” Westphal et al. does not

anticipate the recited claims. *See, Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Claim 11 is an independent claim and is amended herein. The amendments to Claim 11 are supported by the Specification. Claim 11 recites, in part, an improved cathode substrate comprising “a substrate; a cap layer disposed on said substrate; an anti-reflective coating...included within the cap layer...; a conductive layer overlying said cap layer and anti-reflective coating; and an array of emitter tips formed from said conductive layer...” Unlike Claim 11, Westphal et al. does not recite “an anti-reflective coating...included within the cap layer” or “a conductive layer overlying said cap layer and anti-reflective coating.” The failure of Westphal et al. to expressly or inherently describe such recitations precludes an anticipation rejection under 35 U.S.C. § 102(e). *See, Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

To anticipate a claim, “the identical invention must be shown in as complete detail as is contained in the claim.” *See, Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The Action alleges that the resistive layer 22 described by Westphal et al. is an anti-reflective layer as recited in Claim 11 because amorphous silicon, from which the resistive layer 22 is formed, “is an anti-reflective material.” *See, Action* at p. 3. Regardless of any anti-reflective properties of amorphous silicon, Westphal et al. does not describe the inclusion of the resistive layer 22 “within the cap layer” as recited in Claim 11. Thus, Westphal et al. fails to describe an anti-reflective coating in as complete detail as recited in Claim 11, which precludes an anticipation rejection.

Furthermore, Westphal et al. does not describe its resistive layer 22 as an anti-reflective coating. Rather, the resistive layer 22 of Westphal et al. is described as a conductive layer wherein each emitter tip “is in direct electrical contact with resistive layer 22.” *See, Westphal et al.* at col. 3, lines 24-26. Westphal et al. also dictates that the resistive layer 22 be formed from a material having the “desired electrical characteristics,” not desired anti-reflective characteristics. *Id.* at lines 54-57. The resistive layer 22 of Westphal et al. is clearly described as a conductive layer and not an anti-reflective coating. These descriptions fail to describe the anti-reflective coating as recited in Claim 11 and therefore fail to anticipate Claim 11.

Additionally, if the resistive layer 22 of Westphal et al. is considered to be an anti-reflective coating, then Westphal et al. does not describe “a conductive layer overlying said cap layer and anti-reflective coating” as recited in Claim 11. The lack of such description precludes an anticipation rejection because Westphal et al. fails to describe each and every recitation of Claim 11. *See, Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

The failure of Westphal et al. to expressly or inherently describe each of the recitations of Claim 11 in as much detail as contained in Claim 11 precludes an anticipation rejection of that claim. For at least the foregoing reasons, the anticipation rejection of Claim 11 under 35 U.S.C. § 102(e) in light of Westphal et al. should be withdrawn.

Claims 12 through 13, 15, 17, and 18 are dependent claims of Claim 11. As dependent claims, the claims inherit the recitations of the independent claim from which they depend. Thus, each of dependent Claims 12 through 13, 15, 17, and 18 inherit the recitations of Claim 11 which are not anticipated by Westphal et al. The failure of Westphal et al. to anticipate Claim 11 also precludes an anticipation rejection of dependent Claims 12 through 13, 15, 17, and 18.

Further, Claim 15 is amended herein and recites an improve cathode substrate “wherein said cap layer is selected from the group consisting of silicon carbide, and diamond-like carbon.” Westphal et al. does not describe a cap layer of silicon carbide or a diamond-like carbon. Thus, Westphal et al. fails to describe all of the recitations of Claim 15 and is not a proper anticipatory reference.

Claim 21 is an independent claim and recites, in part, “depositing a cap layer with an anti-reflective coating within it on the substrate, with the anti-reflective coating extending across an expanse of the cap layer.” Westphal et al. does not expressly or inherently disclose the deposition of a “cap layer with an anti-reflective coating within it” on a substrate as recited in Claim 21. As previously discussed, the resistive layer 22 of Westphal et al. is not an anti-reflective coating that is included within a cap layer. Thus, Westphal et al. does not anticipate Claim 21 because it does not describe the recitations of Claim 21 in as complete detail as recited in the claim. *See, Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The failure of Westphal et al. to anticipate Claim 21 carries over to the claims depending therefrom. Claims 22, 25, and 27 depend from Claim 21 and inherit the recitations of Claim 21

by dependency. As dependent claims of a non-anticipated independent claim, Claims 22, 25, and 27 are also not anticipated.

Claim 31 is an independent claim and recites, in part, “a cap layer disposed on said substrate” and “a light blocking layer...included within the cap layer.” The Action alleges that the resistive layer 22 of Westphal et al. “is formed of polycrystalline silicon or amorphous silicon...which is a light blocking material, thus forming a light blocking layer extending across an expanse of the cap layer 20.” *See, Action* at p. 3. Westphal et al., however, does not describe a resistive layer 22 formed “within the cap layer” as recited in Claim 31. Contrary to the Action’s allegations, the formation of the resistive layer 22 over a cap layer is not equivalent to the formation of “a light blocking layer...included within the cap layer.” Westphal et al.’s failure to describe an invention in as much detail as recited in Claim 31 precludes an anticipation rejection of Claim 31. *See, Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Claims 32, 33, 35, 37, and 38 depend from Claim 31. As independent claims, they inherit the recitations of Claim 31. The lack of anticipation by Westphal et al. of Claim 31 also precludes the anticipation of Claims 32, 33, 35, 37, and 38. The anticipation rejection of Claims 32, 33, 35, 37, and 38 should be withdrawn.

Claim 39 recites, in part, “depositing a cap layer with a light blocking layer within it on the substrate with the light blocking layer extending across an expanse of the cap layer.” Westphal et al. does not describe the deposition of a cap layer having “a light blocking layer within it” as recited in Claim 39. The failure of Westphal et al. to expressly or inherently describe the recitations of Claim 39 in as much detail as found in the claims precludes an anticipation rejection of that claim based upon Westphal et al. *See, Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Claims 40, 41, 43, and 45-46 depend from Claim 39. As dependent claims of a non-anticipated claim, Claims 40, 41, 43, and 45-46 are also not anticipated because they inherit all of the recitations of the independent claim from which they depend. As such, Westphal et al. fails to expressly or inherently describe all of the recitations of each dependent claim, respectively. The anticipation rejection of Claims 39 through 41, 43, and 45 through 46 should be withdrawn.

For at least the foregoing reasons, Claims 11 through 13, 15, 17, 18, 21 through 23, 25, 27, 28, 31 through 33, 35, 37 through 41, 43, 45 and 46 are not anticipated and the 35 U.S.C. § 102(e) rejection should be withdrawn.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on U.S. Patent No. 5,656,886 to Westphal et al. as applied to claim 11

Claims 14, 16, 24, 26, 34, 36, 42 and 44 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Westphal et al. (U.S. Patent No. 5,656,886) as applied to claim 11. Applicants respectfully traverse this rejection, as hereinafter set forth.

Claims 14, 24, 34, and 42 stand rejected under 35 U.S.C. § 103(a) as being obvious in light of Westphal et al. because, allegedly, “the specification of a suitable thickness is within the skill of the art.” *See, Action* at p. 4. Each of Claims 14, 24, 34, and 42, however, are dependent claims of a non-obvious independent claim. Dependent claims of non-obvious independent claims are themselves non-obvious. More particularly, “if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious.” *See, M.P.E.P. § 2143.03* (citing, *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)). Therefore, the 35 U.S.C. § 103(a) obviousness rejection of Claims 14, 24, 34, and 42 should be withdrawn.

Similarly, Claims 16, 26, 36, and 44 depend from non-obvious independent claims. As dependent claims of non-obvious independent claims, Claims 16, 26, 36, and 44 are non-obvious. The 35 U.S.C. § 103(a) obviousness rejection should be withdrawn.

For at least the foregoing reasons, Claims 14, 16, 24, 26, 34, 36, 42 and 44 are non-obvious and the 35 U.S.C. § 103(a) rejection of the claims should be withdrawn.

ENTRY OF AMENDMENTS

The amendments to claims 11 through 18 and 21 through 28 above should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add any new matter to the application.

CONCLUSION

Claims 11 through 18, 21 through 28, and 31 through 46 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicants' undersigned attorney.

Respectfully submitted,



Devin R. Jensen
Registration No. 44,805
Attorney for Applicants
TRASKBRITT
P.O. Box 2550
Salt Lake City, Utah 84110-2550
Telephone: 801-532-1922

Date: October 21, 2005

DRJ/djp:lmh

Document in ProLaw